SHARP

MODEL

AR-NB2
AR-NB2 N

NETWORK EXPANSION KIT

OPERATION MANUAL
(for network scanner)

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AR-M160/M205

INTRODUCTION

The optional network expansion kit enables the machine to be used as a network scanner.

- To use the network scanner function, the dual function board (AR-EB7) must be installed in the machine.
- Use the USB 2.0 connector on the dual function board to connect the machine to the network expansion kit. The network scanner function cannot be used if the network expansion kit is connected to the USB 1.1 connector on the machine.

- This manual only explains features that can be used when the optional network expansion kit is installed. For information on loading paper, replacing toner cartridges, clearing paper misfeeds, handling peripheral devices, and other copier-related information, please refer to your operation manual for the machine.
  For information on the printer function that can be used when the network expansion kit is installed, see the online manual for the network printer that accompanies the network expansion kit.
- The explanations in this manual assume that the person who will install the product and the users of the product have a working knowledge of Microsoft Windows.
- This manual refers to the digital multifunctional system AR-M160/M205 as "the machine".
- For information on the operating system, please refer to your operating system manual or the online Help function.
- The explanations of screens and procedures in this manual are for Windows XP. The screens may vary depending on your Windows version and settings.
- This manual refers to the Single Pass Feeder as the "SPF", and the Reversing Single Pass Feeder as the "RSPF".
- Wherever "AR-XXXX" appears in this manual, please substitute your model name for "XXXX". For information on your model name, see "DIFFERENCES BETWEEN MODELS" in the operation manual.

The display screens, messages, and key names shown in the manual may differ from those on the actual machine due to product improvements and modifications.

Warranty

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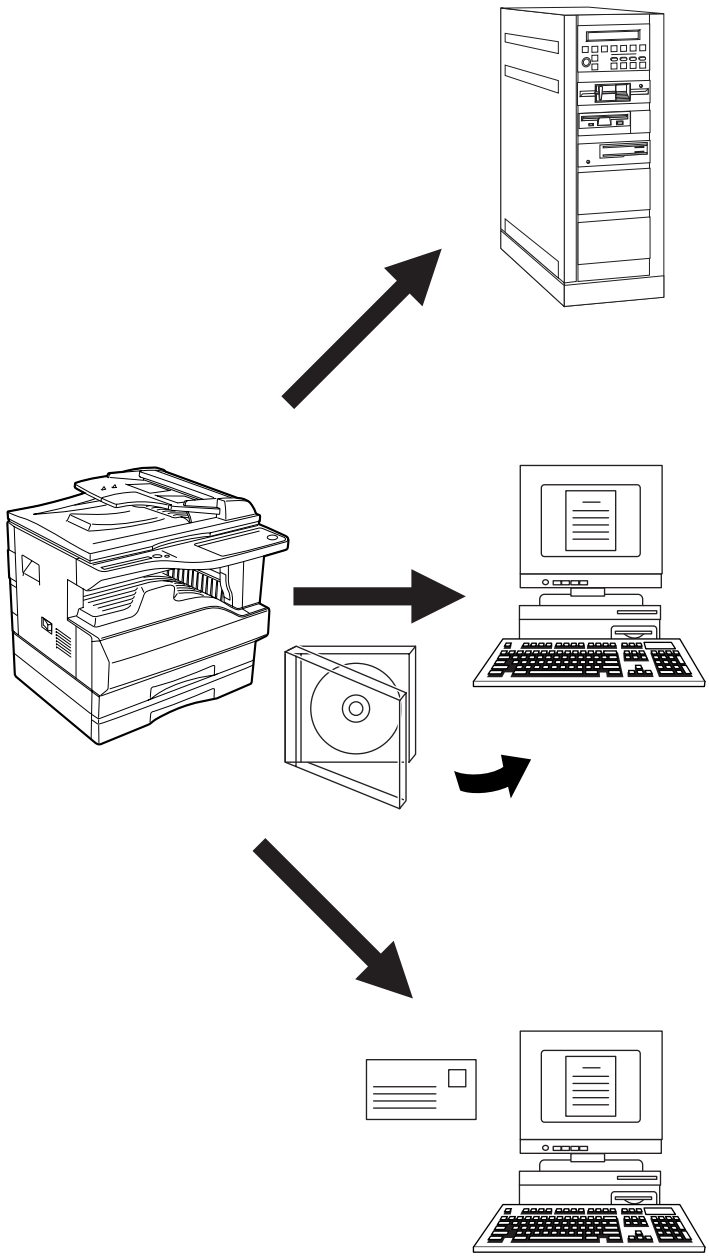
5 SPECIFICATIONS

ABOUT THE NETWORK SCANNER FUNCTION

When the network expansion kit is installed in the machine, a document or photo can be scanned into an image file and sent over a network or the Internet to a file server, e-mail destination, or your own computer. The scanned image can be sent to the following types of destinations:



1. The scanned image can be sent to a memory storage device on a network (a designated directory on an FTP server). (This is called **"Scan to FTP"** in this manual.)
   When sending scanned image to an FTP server, an e-mail message can also be sent to a preset e-mail address to inform the recipient of the location of the scanned image data. (This is called **"Scan to FTP (Hyperlink)"** in this manual.)

2. A scanned image can be sent to a computer connected to the same network as the machine. (This is called **"Scan to Desktop"** in this manual.)

   * Before Scan to Desktop can be performed, the "Network Scanner Tool" software in the CD-ROM that accompanied the network expansion kit must be installed. For the system requirements for Scan to Desktop and the procedure for installing the Network Scanner Tool, see "NETWORK EXPANSION KIT CD-ROM" (p.25).

3. The scanned image can be sent to an e-mail recipient. (This is called **"Scan to E-mail"** in this manual.)

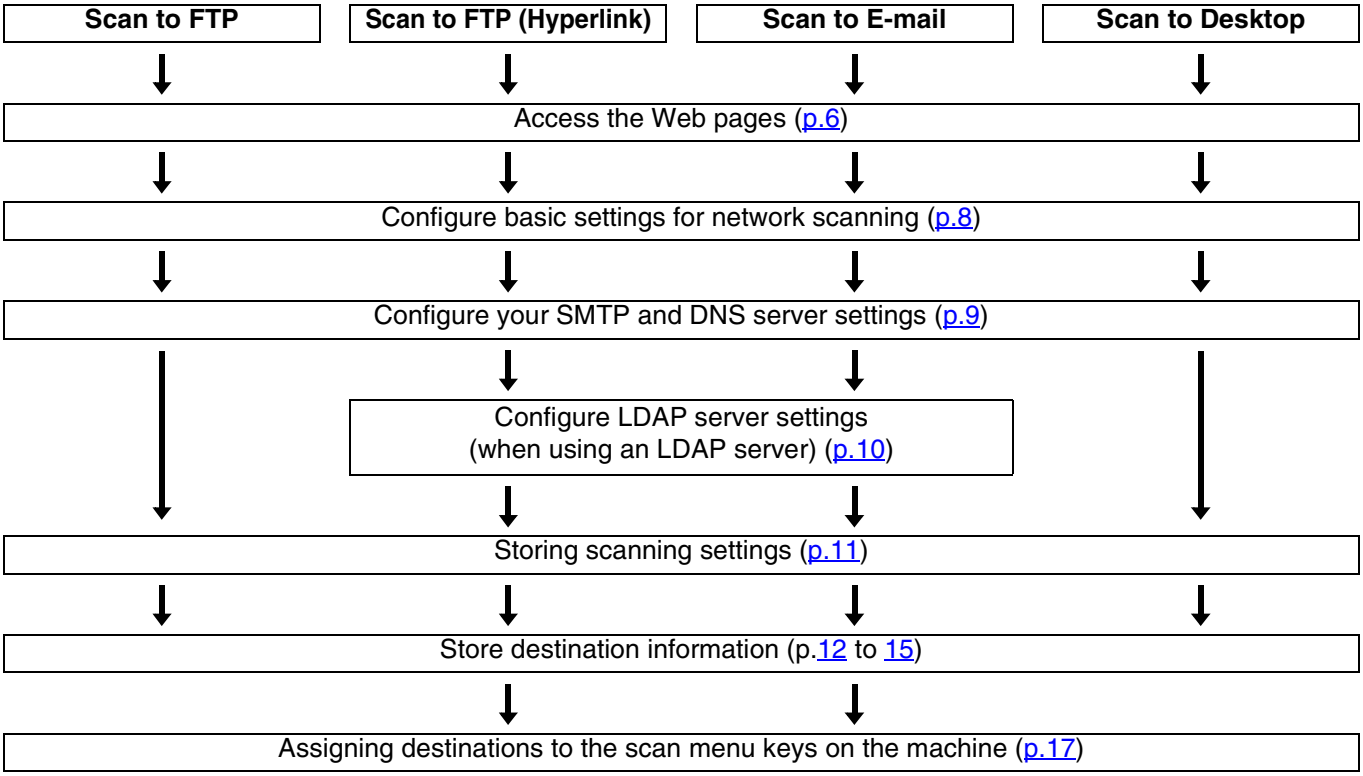
   * A limit is set in the Web page for the size of image files that can be sent using Scan to E-mail (p.8).

SETTINGS AND PROGRAMMING REQUIRED FOR THE NETWORK SCANNER FEATURE

To the Network Scanner feature, settings for the SMTP server, DNS server, and destination addresses must be established.
To establish the settings, use a computer that is connected to the same network as the machine to access the machine's Web page. The Web page can be displayed with your Web browser (Internet Explorer 5.5 or later, or Netscape Navigator 6.0 or later).

SETTINGS REQUIRED FOR THE NETWORK SCANNER FUNCTION

To transmit images using the network scanner function, configure the settings in the Web pages as follows:


Scan to FTP
Scan to FTP (Hyperlink)
Scan to E-mail
Scan to Desktop
Access the Web pages (p.6)
Configure basic settings for network scanning (p.8)
Configure your SMTP and DNS server settings (p.9)
Configure LDAP server settings
(when using an LDAP server) (p.10)
Storing scanning settings (p.11)
Store destination information (p.12 to 15)
Assigning destinations to the scan menu keys on the machine (p.17)

The following settings can also be configured to enable convenient use of the network scanner function:
• Changing the Web page language (p.6) • Setting passwords. (p.18)

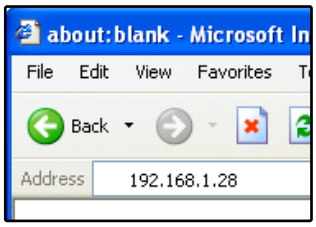
ACCESSING WEB PAGES

Use the following procedure to access the Web pages.

1 Open the Web browser on your computer.

Supported browsers: Internet Explorer 5.5 or later
Netscape Navigator 6.0 or later

2 In the "Address" field of your Web browser, enter the IP address of the machine as a URL.



Enter the IP address that has been programmed in the machine.
If you do not know the IP address, see page 24.

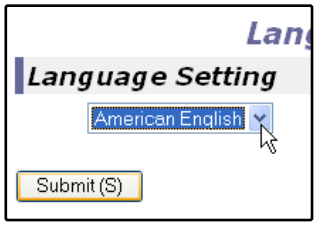
When the connection is completed, the Web page will appear in your Web browser.

CHANGING THE WEB PAGE LANGUAGE

The language appearing in the Web page can be changed.

1 Click "Language Setting" in the menu frame.

2 Select the desired language in the "Language Setting" menu and click "Submit".

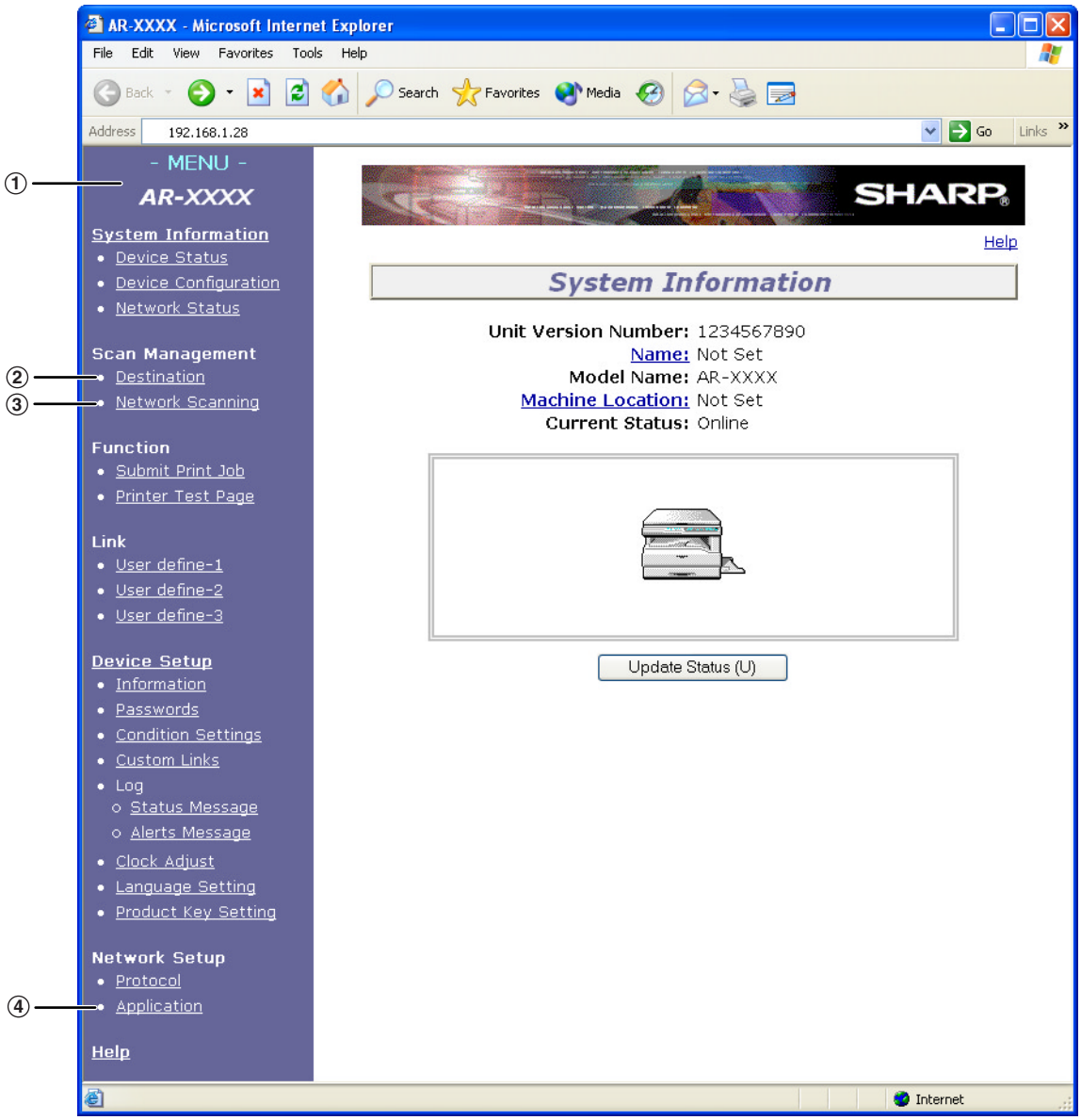


3 Turn the machine power off and then on.

The language appearing in the Web page will change to the selected language when the Web page is refreshed.

ABOUT THE WEB PAGE

When you access the Web page in the machine, the following page will appear in your browser.
A menu frame appears on the left side of the page. When you click an item in the menu, a screen appears in the right frame that allows you to establish settings for that item.
For detailed explanations of the procedures for establishing settings, click "Help" in the menu frame.



① **Menu frame**
Click the menu items displayed here to configure the corresponding settings.

② **Destination (p.12)**
Set up destinations for Scan to FTP, Scan to FTP (Hyperlink), Scan to Desktop, and Scan to E-mail. You can also edit or delete previously set destination information.

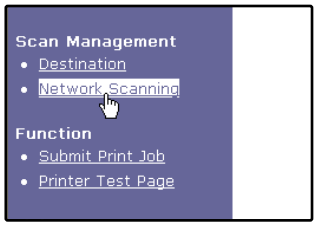
③ **Network Scanning (p.8)**
This lets you select transmission methods for the network scanner function, configure settings for Scan to E-mail.

④ **Application (p.9)**
This lets you establish SMTP server settings, DNS server settings, and WINS server settings for Scan to E-mail and Scan to FTP (Hyperlink), and for entering a host name instead of an IP address when storing a transmission destination.
Configure LDAP server settings if an LDAP server is used.

BASIC SETTINGS FOR NETWORK SCANNING

Click "Network Scanning" in the menu frame, and then establish the required settings. These settings should only be established by the network administrator.
For detailed explanations of the procedures for establishing settings, click "Help" in the menu frame.

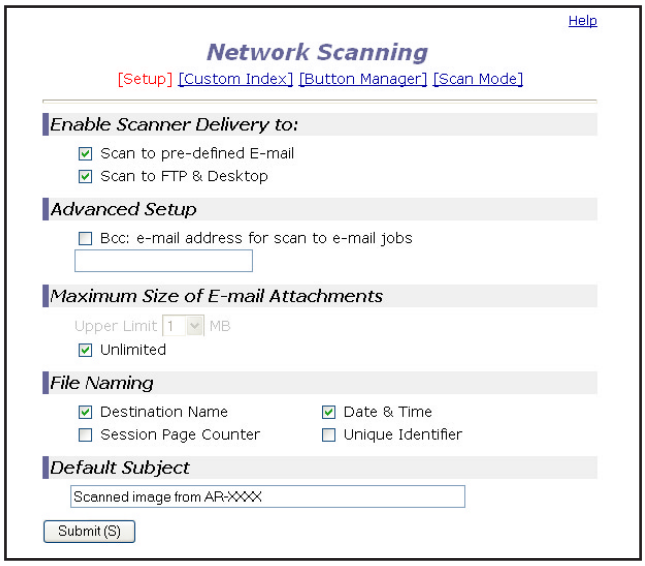
1 Click "Network Scanning" in the menu frame.



The Network Scanning Setup page appears.

2 Select the transmission methods that you wish to use.

Select the scanner delivery methods that you want to use. In the "Enable Scanner Delivery to:" field, click the checkbox next to each method that you want to use so that a checkmark appears in the checkbox.
All transmission methods are initially selected (factory default settings).



3 Configure the Advanced Setup settings.

Select advanced functions that can be used for Scan to E-mail.
If you wish to Bcc a copy of a Scan to E-mail transmission to an e-mail address, select the "Bcc:" checkbox and enter the e-mail address.

4 Set a limit for the size of image files.

A limit can be set for the size of image files sent by Scan to E-mail to prevent excessively large files from being sent.
If the image file created from the scanned image is larger than the set limit, the image file is discarded. The limit can be set from 1 MB to 10 MB in increments of 1 MB.
The factory default setting is "Unlimited". If you wish to set a limit, remove the checkmark from the "Unlimited" checkbox and enter the desired limit in "Upper Limit".

5 Select the method for assigning a file name to a scanned image.

Select the method for assigning a file name to a scanned image. In "File Naming", click the items that you wish to use in the file name. "Destination Name" and "Date & Time" are initially selected.

Note

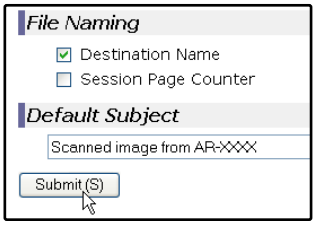
If you are going to send images to the same recipient more than once, we recommend that you also select "Session Page Counter" or "Unique Identifier" to prevent sending multiple files with the same name, which would result in each successive file overwriting the previous file.

6 Selecting an e-mail subject (only used for Scan to E-mail).

The setting is used to enter the subject that appears in the recipient's e-mail program when you perform Scan to E-mail. (This setting is not necessary if you will not be using Scan to E-mail.) The subject can be up to 80 characters long. Only one subject can be entered. If nothing is entered, "Scanned image from <Device Name>" will appear.

* The name that appears in <Device Name> is the name stored in "Name" in the screen that appears when you click "System Information" in the menu frame. If a name has not been stored, the product name will appear.

7 Click "Submit".



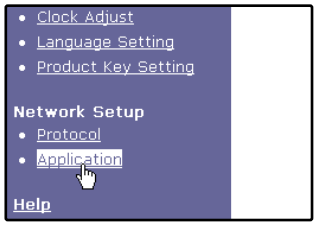
After entering the settings, be sure to click "Submit" to store them.

SMTP SERVER AND DNS SERVER SETTINGS

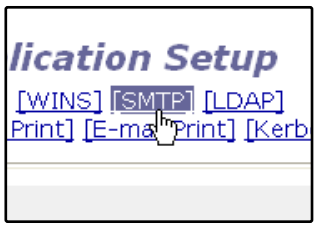
SMTP is used to transmit e-mail that is sent using Scan to E-mail or Scan to FTP (Hyperlink). To use these transmission methods, your SMTP server settings must be configured.

Configuring SMTP server settings

1 Click "Application" in the menu frame.



2 Click "SMTP".



3 Enter the required information in "SMTP Setup".

For explanations of each of the items, click "Help" in the menu frame.

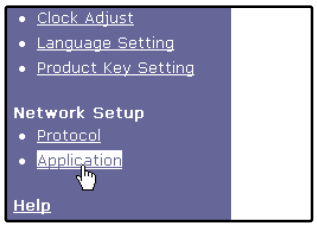
4 When you have completed all of the entries, click "Submit".

The entries will be stored.

Configuring DNS server settings

If you entered a host name in "Primary SMTP Server" or "Secondary SMTP Server" of "SMTP Setup", you must also configure your DNS server settings.
You will also need to configure your DNS server settings if host names will be entered in "Hostname or IP Address" when storing destinations for Scan to FTP (Scan to FTP (Hyperlink)) or Scan to Desktop.

1 Click "Application" in the menu frame.



2 Click "DNS".

3 Enter the required information in "DNS Setup".

For explanations of each of the items, click "Help" in the menu frame.

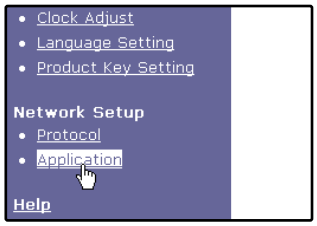
4 When you have completed all of the entries, click "Submit".

The entries will be stored.

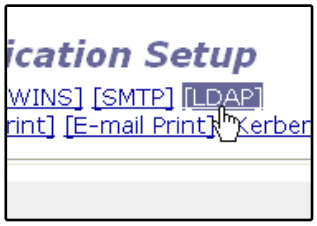
CONFIGURING LDAP SERVER SETTINGS (WHEN USING AN LDAP SERVER)

If mail addresses are managed on your network by an LDAP server, the e-mail addresses stored in the LDAP server can be used for Scan to E-mail.
To allow the machine to use the e-mail addresses in the LDAP server, the LDAP server settings must be configured in the Web page.

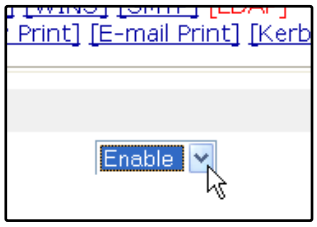
1 Click "Application" in the menu frame.



2 Click "LDAP".



3 Select "Enable" in the "LDAP Setup" menu.



4 Click "Submit".

5 Configure the settings in "Global Address Books List".

For explanations of each of the items, click "Help" in the menu frame.

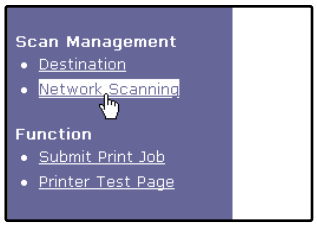
6 When you have completed all of the entries, click "Submit".

The entries will be stored.

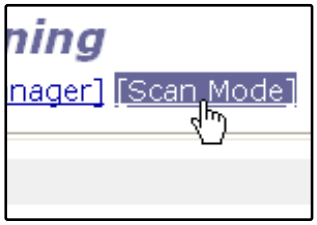
STORING SCANNING SETTINGS

Sets of scan settings (scan size, color mode, resolution, file type, etc.) can be stored for use in various scanning applications. Each set of settings is called a "Scan Mode". When storing a destination, you can select one of the stored scanned modes. The settings of the selected scan mode will be used when you scan an image and send it to that destination (p.12 to 15).

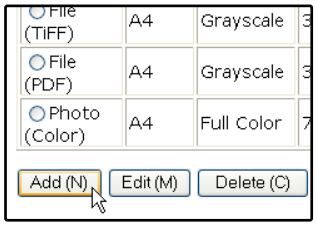
1 Click "Network Scanning" in the menu frame of the Web page.



2 Click "Scan Mode".



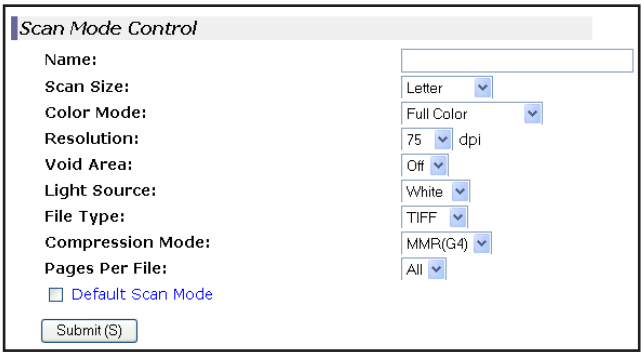
3 Click "Add" below the scan list.



If you need to change the settings in a previously stored scan mode, select the scan mode and click "Edit". To delete a scan mode, select the scan mode and click "Delete".

4 Select the desired scanning settings.

To view explanations of the settings, click "Help" in the menu frame.
When an original is scanned using the document glass, the scanning area is determined by the "Scan Size" setting. Read "IMAGE ORIENTATION AND STANDARD ORIGINAL LOADING ORIENTATION" (p.20) and make sure that the correct scan size is selected.



The default settings are shown in the following table:

Item	Default setting	Item	Default setting
Scan Size	Letter	Light Source	White
Color Mode	Full Color	File Type	TIFF
Resolution	75 dpi	Compression Mode	MMR(G4)
Void Area	Off	Pages Per File	All

5 When you have finished selecting the settings, click "Submit".

The selected settings are stored.

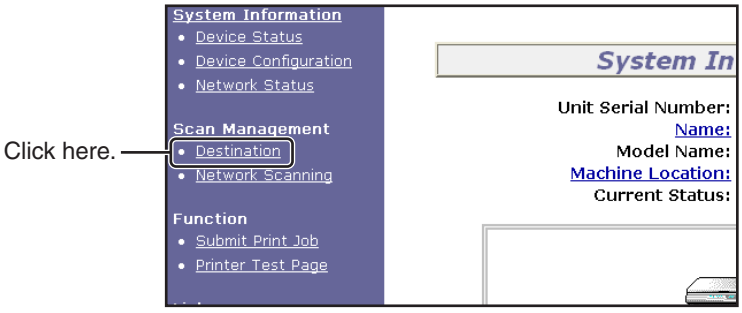
Note

- When the original size is automatically detected in the SPF/RSPF, the detected size is used instead of the scanning size set in "Scan Size". For this reason, if the original is larger than the size set in "Scan Size", it may be scanned at a lower resolution than the selected resolution.
- To scan a ledger, A3, or other large original at a high resolution setting such as 600 dpi, the machine memory or network expansion kit memory must be expanded. (A high resolution setting can be selected with only standard memory, however, the machine will scan the original at a lower resolution and enhance the image.) To scan large originals at high resolution when the color mode is set to "mono 2 gradation", the network expansion kit memory must be expanded. To scan large originals at high resolution when the color mode is set to full color or grayscale, the machine memory must be expanded.
- For normal text originals, a sufficiently legible image is produced when the color mode is set to "Mono 2 gradation" and the resolution is 200 dpi or 300 dpi.
  The 600 dpi setting should only be used in cases where high-clarity image reproduction is required, such as a photograph or an illustration. Note that a high resolution setting will result in a larger file size, and transmission may not be successful if there is insufficient disk capacity in the server to which the image is sent (or if the administrator of the server has restricted the file size). If transmission is not successful, you can try such measures as reducing the number of scanned pages in the file or reducing the scan size setting for the original.
- The resolution settings that can be selected vary depending on the scan size, color mode, and light source settings.
- To open the scanned image without using the software program in the CD-ROM that accompanies the network expansion kit, the recipient must have a viewer program that can open the image format (file type) that was selected as explained above.
- The factory default setting for the image format produces the smallest file (File Type: TIFF, Compression Mode: MMR (G4)). If the recipient cannot open the image, try sending the image in a different format.
- Number of pages per file
  If the number of scanned originals is not divisible by the number set in "Pages Per File", the last file will have less pages.
- If you wish to use a scan mode as the default scan mode when storing destinations, select the "Default Scan Mode" checkbox.
- The scan settings stored in a scan mode cannot be edited or deleted if the scan mode has been selected for a destination.

STORING DESTINATIONS

To store scanning destinations, click "Destination" in the Web page menu frame. "Destination" can also be used to edit or clear stored destinations. (p.16)
A total of 200 destinations* can be stored, including E-mail, FTP, Desktop, and Group destinations. Up to six of these destinations can be assigned to the machine's [SCAN MENU] keys.
Stored destinations can be selected in the machine's operation panel when transmission is performed.

* Multiple e-mail addresses (up to 100) can be stored as a group. Note that this may reduce the maximum number of destinations (normally 200) that can be stored.

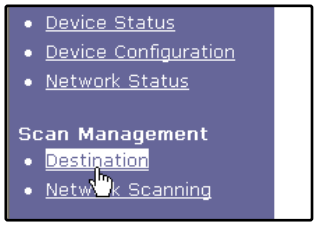


E-mail: See below
FTP: Refer to page 13.
Desktop: Refer to page 14.
Group: Refer to page 15.

1

Storing destinations for Scan to E-mail

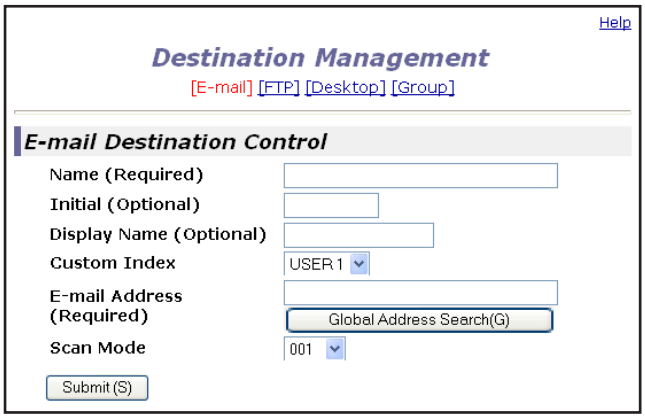
1 Click "Destination" in the menu frame.



2 Click "E-mail".

3 Enter the destination information.

For explanations of each of the items, click "Help" in the menu frame.



Note Use "Scan Mode" to select a set of previously stored scanning settings (see "STORING SCANNING SETTINGS" on page 11). The list shows the names of the stored scan modes.

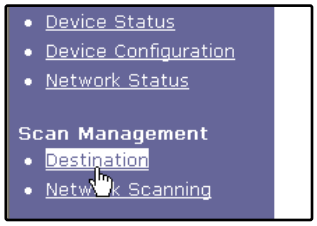
4 When you have completed all of the entries, click "Submit".

The entries will be stored.

Note To perform Scan to E-mail, the SMTP server settings must first be established. Click "Application" in the Web page, click "SMTP" in the screen that appears, and then enter the settings under "SMTP Setup" (p.9).

Storing destinations for Scan to FTP

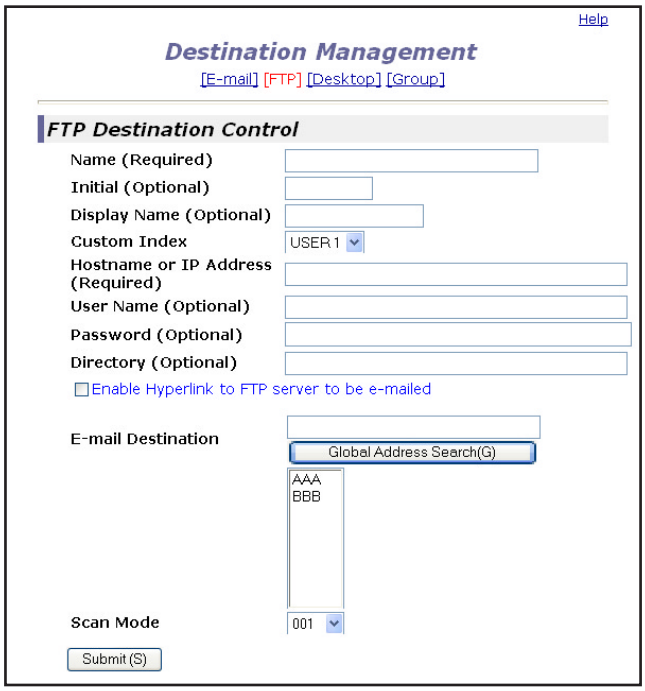
1 Click "Destination" in the menu frame.



2 Click "FTP".

3 Enter the destination information.

For explanations of each of the items, click "Help" in the menu frame.



Note

- If you select the "Enable Hyperlink to FTP server to be e-mailed" checkbox and select a previously stored recipient (p.12) from "E-mail Destination", an e-mail will be sent to the recipient informing them of the file format and location of the scanned image data. A hyperlink to the file server to which the scanned image data was sent appears in the e-mail, and the recipient can click the hyperlink to go directly to the location where the image data is stored.
- Use "Scan Mode" to select a set of previously stored scanning settings (see "STORING SCANNING SETTINGS" on page 11). The list shows the names of the stored scan modes.

4 When you have completed all of the entries, click "Submit".

The entries will be stored.

Note

If you entered a host name in "Hostname or IP Address", you will need to enter the DNS server or WINS server settings. Click "Application" in the menu frame and then click "DNS" or "WINS" in the page that appears to configure the corresponding settings.
To perform Scan to FTP (Hyperlink), you must also click "SMTP" and then enter the settings under "SMTP Setup" for the SMTP server (p.9).

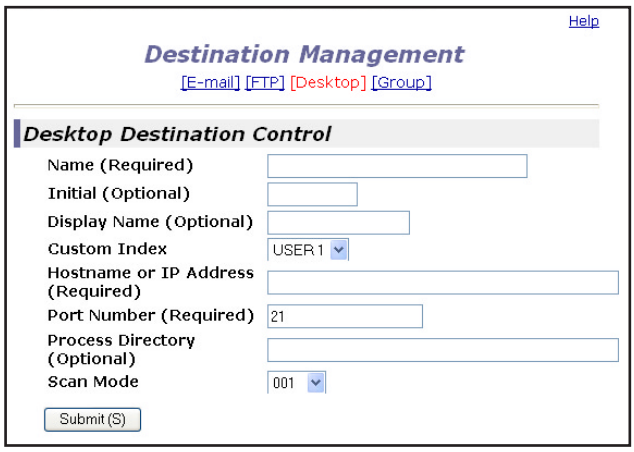
Storing destinations for Scan to Desktop

The destination for Scan to Desktop is stored by the Sharp Network Scanner Tool Setup Wizard when "Network Scanner Tool" is installed in your computer. For this reason, there is no need to store the Scan to Desktop destination in the Web page. (The Network Scanner Tool is on the "Sharpdesk LT" CD-ROM that accompanied the Network Expansion Kit .)
For information on Scan to Desktop system requirements, installing the Network Scanner Tool, and storing the destination, see "NETWORK EXPANSION KIT CD-ROM" (p.25).
Normally your computer is stored as the destination by the method indicated above.

The following page for storing Scan to Desktop destination information appears when "Destination" is selected in the menu frame, followed by "Desktop". This page is used mainly by the system administrator in the following circumstance.

- When another machine with the network scanner function has been added to the same network, and you wish to perform Scan to Desktop from the added machine to a destination programmed in the previously existing machine.

Refer to "Editing and deleting programmed transmission destinations" (p.16), and select the Scan to Desktop destination information that you wish to transfer to the new machine. Enter the displayed information in the same setting screen of the new machine. (When all information has been entered, click "Submit".)
If there are additional destinations that you want to transfer to the new machine, repeat this procedure for each destination.



Note that if there are any discrepancies between the newly programmed information and the information in the host computer, transmission and reception may not be possible.

Note

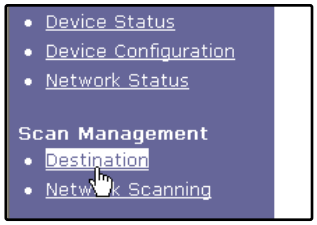
- For explanations of each of the items, click "Help" in the menu frame.
- The default scan mode (the scan mode for which the "Default Scan Mode" checkbox was selected when the settings were stored) is automatically used as the scan mode for the Scan to Desktop destination stored by the Network Scanner Tool. To use a different scan mode, see "Editing and deleting programmed transmission destinations" (p.16).
- If you entered a host name in "Hostname or IP Address", you will need to enter the DNS server or WINS server settings. Click "Application" in the menu frame and then click "DNS" or "WINS" in the page that appears to configure the corresponding settings.

Storing Groups (Scan to E-mail)

If you are using Scan to E-mail, a scanned image can be sent to multiple destinations in a single operation.

Note Up to 100 destinations can be stored in one group.

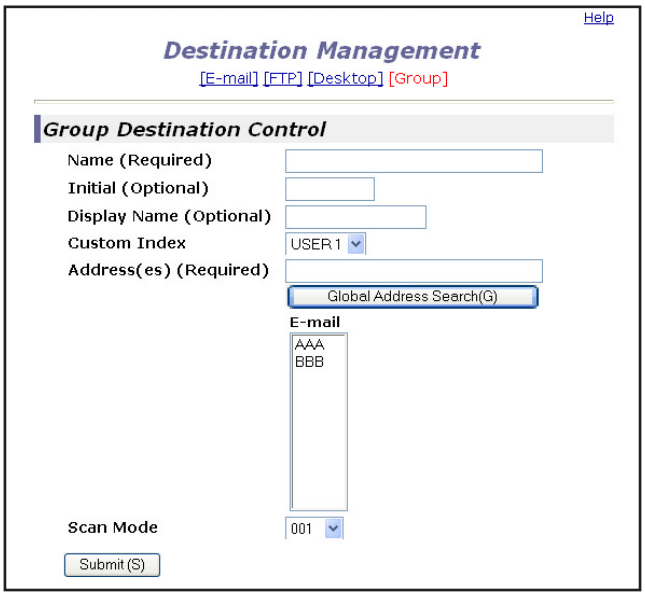
1 Click "Destination" in the menu frame.



2 Click "Group".

3 Enter the destination information.

For explanations of each of the items, click "Help" in the menu frame.



Note Use "Scan Mode" to select a set of previously stored scanning settings (see "STORING SCANNING SETTINGS" on page 11). The list shows the names of the stored scan modes.

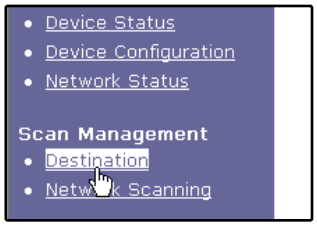
4 When you have completed all of the entries, click "Submit".

The entries will be stored.

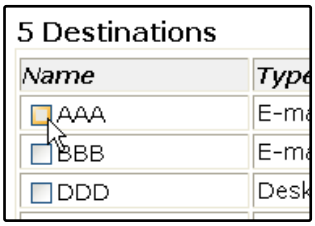
Editing and deleting programmed transmission destinations

To edit or delete programmed destinations, click "Destination" in the menu frame of the Web page.

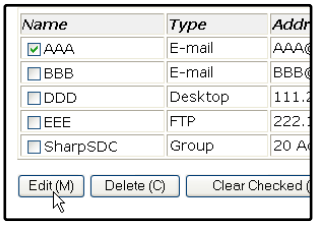
1 Click "Destination" in the menu frame of the Web page.



2 In the Destinations List, click the checkbox of the destination that you want to edit or delete.



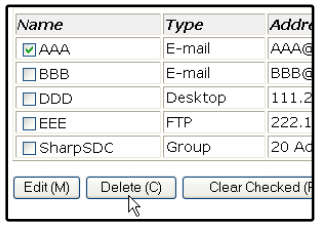
3 To edit the selected destination, click "Edit" under the Destinations List.



The programming screen of the destination selected in step 2 appears. Edit the information in the same way as you initially stored it.

When finished, be sure to click "Submit" to save your changes.

To delete the selected destination, click "Delete" under the Destinations List.



A message appears asking you to confirm the deletion. Click "Yes" to delete.

Note

If you attempt to delete a programmed destination in the following situations, a warning message will appear and deletion will not be possible.

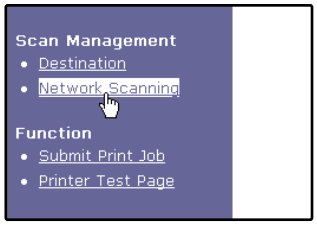
- The destination that you are attempting to delete is assigned to a [SCAN MENU] key.
- The destination is included in a group.

If the destination has been assigned to a [SCAN MENU] key, delete the assignment and then delete the destination. If the destination is included in a group, delete the destination from the group and then delete the destination.

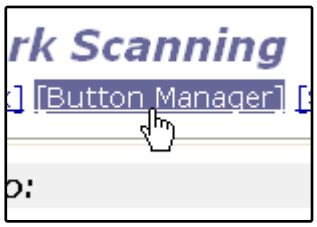
ASSIGNING DESTINATIONS TO THE SCAN MENU KEYS ON THE MACHINE

Stored destinations (p.12 to 15) can be assigned to the six scan menu keys on the machine. This lets you use a menu key to send a scanned image to the assigned destination.

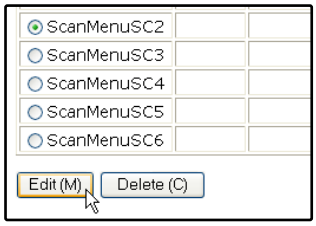
1 Click "Network Scanning" in the menu frame of the Web page.



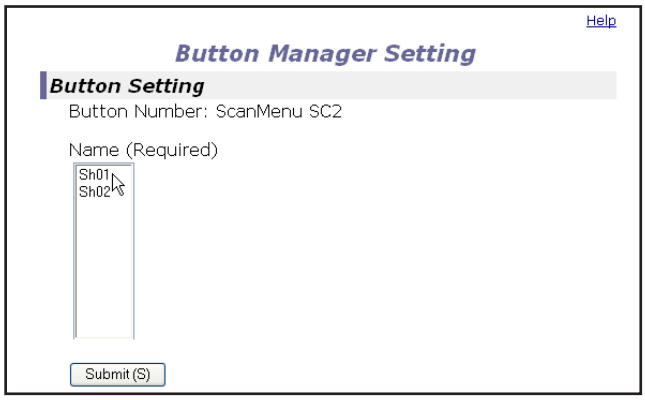
2 Click "Button Manager".



3 Click the checkboxes of the scan menu keys to which you wish to assign destinations, and then click "Edit" below the button list.



4 Select the destination that you wish to assign to each scan menu key.



5 Click "Submit".

The selected destination information is assigned to the scan menu key.

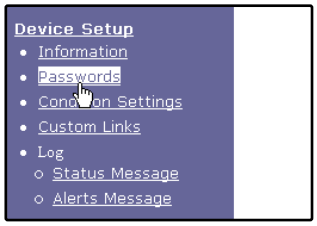
Editing or deleting a [SCAN MENU] key assignment

To change a destination assigned to a [SCAN MENU] key, perform the above procedure.
To delete a [SCAN MENU] key assignment, click "Delete" in step 3.

PROTECTING INFORMATION PROGRAMMED IN THE WEB PAGE ("Passwords")

Passwords can be established to protect the settings and information stored in the Web page. Note that it is not necessary to set passwords; the network scanner functionality can also be used without passwords.
A password can be set for the administrator and a password can be set for users. When the Web page is accessed with the user password, the "Device Setup" and "Network Setup" settings cannot be configured.

1 Click "Passwords" in the menu frame.



2 Select the "Enable Password Protection of this Web Site" checkbox.

3 Enter the current password in "Admin Password".

When establishing a password for the first time, enter "**Sharp**" in "Admin Password".

Caution Be sure to enter "S" in upper case and "harp" in lower case (passwords are case sensitive).

4 Enter passwords in "User Password" and "Admin Password".

A maximum of 7 characters and/or numbers can be entered for each password (passwords are case sensitive).
Be sure to enter the same password in "New Password" as you did in "Confirm Password".

5 When you have completed all of the entries, click "Submit".

The entered password is stored.
After setting the password, turn the machine power off and then back on.

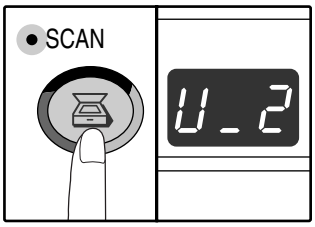
When a password is set, you will be prompted for the password when you attempt to access a Web page with protected settings. For the "User name", enter "user" if you are accessing the page as a user, or "admin" if you are accessing the page as an administrator. For detailed information on setting passwords, refer to "Help".

2 Chapter 2 USING THE NETWORK SCANNER FUNCTION

This section explains the procedure for scanning from the machine after the network scanner settings have been configured in the Web page.
For the names and functions of the parts of the machine and operation panel that are used for network scanning, see the operation manual for the machine.

BASIC TRANSMISSION PROCEDURE

1 Press the [SCAN] key.



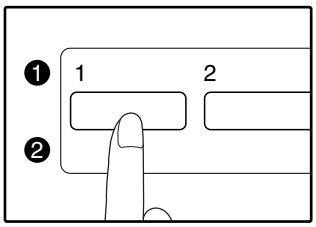
When the SCAN indicator lights up, the machine enters scanner mode.
The interface port changes each time you press the [SCAN] key.

When using the machine's network scanner function, make sure that "U_2" appears in the display, which indicates that the USB 2.0 port is selected.

2 Place the original in the document feeder tray or on the document glass.

For information on how to place the original, see "IMAGE ORIENTATION AND STANDARD ORIGINAL LOADING ORIENTATION" (p.20).

3 Press a [SCAN MENU] key.



Scanning begins.
The SCAN indicator blinks during scanning. While the indicator is blinking, the [SCAN MENU] keys cannot be pressed to begin scanning.
The display will show the number of the [SCAN MENU] key that you pressed.

Note

- To use a [SCAN MENU] key, the scanning method (destination and scan settings) must first be assigned to the key using the Web page (p.17).
- To cancel a scanning job after pressing the [SCAN] key, press the [CLEAR] key (C) or the [CLEAR ALL] key (CA) on the machine.

Caution

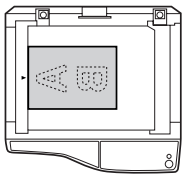
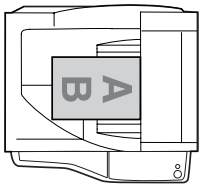
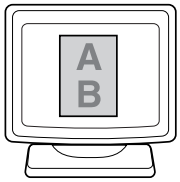
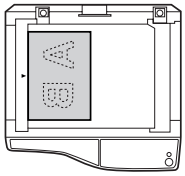
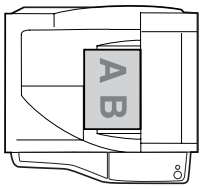
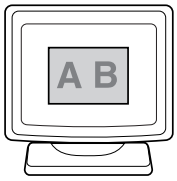
- **Before performing Scan to E-mail, read "IMPORTANT POINTS WHEN USING SCAN TO E-MAIL" and take care that the image file is not too large.**
- **A limit for the size of image files that can be sent using Scan to E-mail can be set in "Maximum Size of E-mail Attachments" (page 8) of the Web page.**

EDITING THE SETTINGS IN A [SCAN MENU] KEY

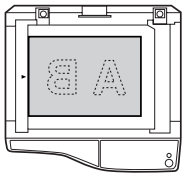
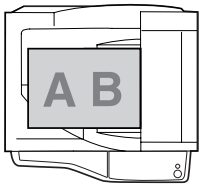
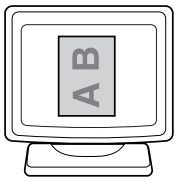
- To change the destination assigned to a [SCAN MENU] key, see "Editing or deleting a [SCAN MENU] key assignment".
- To edit the settings of a destination assigned to a [SCAN MENU] key, see "Editing and deleting programmed transmission destinations".
- The scan settings stored in a scan mode cannot be edited if the scan mode has been selected for a destination. You can either store the desired settings in a new scan mode as explained in "STORING SCANNING SETTINGS" and then edit the destination settings, or you can cancel the selection of the scan mode for the destination and then edit the scan mode settings.

IMAGE ORIENTATION AND STANDARD ORIGINAL LOADING ORIENTATION

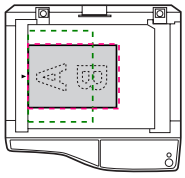
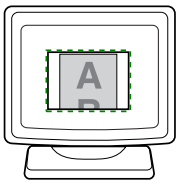
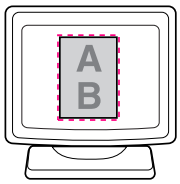
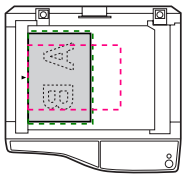
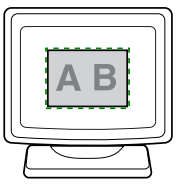
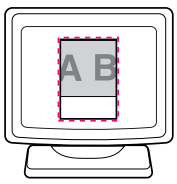
When using the document glass, the original should be placed face down so that it is centered vertically on the glass with the top edge of the original at the left edge of the glass.
When using the SPF/RSPF, the original should be placed face up in the middle of the document feeder tray, with the top of the original to the right.

Document glass	SPF/RSPF	Scanning result
		
		

Long horizontal originals of size 11" x 17", 8-1/2" x 14", A3, or B4 can only be placed as shown below. For this reason, the scanned image will be rotated 90° when viewed on a computer.

Document glass	SPF/RSPF	Scanning result
		

When an original is scanned using the document glass, the scanning area is determined by the "Scan Size" setting of the scan mode stored in the destination information. If the orientation of the placed original does not agree with the scan size setting, not all of the original will be scanned. The following examples show how the scan size setting affects the resulting image when a letter original is scanned on the document glass.

Document glass	Scanning result	
	Scan size = Letter	Scan size = Letter-R
		
		

To change the "Scan Size" setting, see "STORING SCANNING SETTINGS" (p.11).

TROUBLESHOOTING

If a problem or question arises, try to solve the situation using the following information before contacting your authorized SHARP dealer.
Image transmission problems are explained here. For image scanning problems, see the operation manual for the machine.

Problem	Cause and solution
The scanned image is clipped.	**The selected "Scan Size" setting is smaller than the actual original size.** → Set the "Scan Size" to the actual original size (p.11) and make sure that the original is placed in the correct orientation (p.20). If you intentionally selected a size setting smaller than the actual original size, take into consideration the part of the original that you wish to scan when placing the original. For example, if the actual size is 8-1/2" x 11" and you selected 5-1/2" x 8-1/2" for the size setting, place the original so that the part that you wish to scan is within the 5-1/2" x 8-1/2" area at the left, center of the glass.
The received image data cannot be opened.	**The viewer program used by the recipient does not support the format of the received image data.** → Try selecting a different file type (TIFF / PDF / JPEG) and/or a different compression format (None, MH (G3), MMR (G4)) when sending the image data. Otherwise, have the recipient use Sharpdesk LT or a viewer program that supports the above combinations of file types and compression formats.
When the same file name is used for two successive Scan to FTP transmissions, the second file is not sent.	The first file may still remain in the cache of the file server client. Disable use of the cache in the client software.
The recipient does not receive transmitted data.	**There is a mistake in the stored destination information or the wrong destination was selected.** → Make sure that the correct destination information is stored. If there is a mistake, correct it (p.16). Make sure that the correct destination has been assigned to the [SCAN MENU] key (p.17). * If delivery by e-mail (Scan to E-mail) is unsuccessful, an error message such as "Undelivered Message" may be sent to the designated administrator's e-mail address. This information may help you determine the cause of the problem.
The recipient does not receive data sent by e-mail (Scan to E-mail).	Check the Web page to see if a limit has been set for the size of image files sent using Scan to E-mail (the factory default setting is "Unlimited"). A limit can be set from 1 MB to 10 MB. Consult the administrator of the Web page to select a suitable limit (p.8).
	The amount of data that can be sent in one e-mail transmission is sometimes limited by the administrator of the mail server. Even if the amount of data sent is within the limit setting explained above, if it exceeds the limit set by the administrator of the mail server, the data will not be delivered to the recipient. Decrease the amount of data sent in the e-mail transmission (reduce the number of pages scanned). (Ask your mail server administrator what the data limit is for one e-mail transmission.)
Transmission takes a long time.	When there is a large amount of image information, the data file is also large and transmission takes a long time.

Caution

Pay attention to the following points when selecting scan settings to ensure that an image file is created that suits the purpose of transmission in terms of image quality and file size. Scan settings are configured in the Web page.

- **Color mode**
  Select a color mode that is appropriate for the use of the document to be scanned so that the file size will not be larger than necessary.
  Scanning a document with the color mode set to gray scale or black and white will yield a smaller file size than scanning in color.
- **Resolution**
  For normal text originals, a sufficiently legible image is produced when the color mode is set to "Mono 2 gradation" and the resolution is 200 dpi or 300 dpi.
  The 600 dpi setting should only be used in cases where high-clarity image reproduction is required, such as an original that includes photographs or illustrations. Note that a high-resolution setting will result in a larger file size and transmission may not be successful if there is insufficient disk capacity in the server to which the image is sent (or if the administrator of the server has restricted the file size). If transmission is not successful, you can try such measures as reducing the number of scanned pages in the file or reducing the scan size setting for the original.

DISPLAY MESSAGES

If "CE" blinks in the display, press the [START] key. An error code will appear. Solve the problem as explained below.

Error Code	Solution	Page
CE-00 CE-01	Turn off the power and turn it back on. Consult with your network administrator to make sure that no problems exist on the network or in the server. If the error is not cleared after turning the power off and on, turn off the power and contact your dealer.	—
CE-02	Server access denied. The scanned image was not sent because a connection to the server could not be established. Make sure that the SMTP server settings or FTP server settings in the Web page are correct. The procedure for configuring the SMTP server is explained in "SMTP SERVER AND DNS SERVER SETTINGS", and the procedure for editing Scan to FTP destination information is explained in "Editing and deleting programmed transmission destinations".	9, 16
CE-03	The scanned image was not sent because the server was busy or there was too much traffic. Wait briefly and then try again.	—
CE-04	Server access denied. The scanned image was not sent because a connection to the server could not be established. Make sure that the SMTP server settings or FTP server settings in the Web page are correct. The procedure for configuring the SMTP server is explained in "SMTP SERVER AND DNS SERVER SETTINGS", and the procedure for editing Scan to FTP destination information is explained in "Editing and deleting programmed transmission destinations".	9, 16
CE-05	The scanned image was not sent because the directory of the destination FTP server was not correct. Make sure that the correct FTP server information is configured in the Web page.	16
CE-09	The size of the scanned image file exceeds the upper limit set in "Maximum Size of File" in the Web page. Reduce the number of original pages scanned into the file, or change the upper limit set in "Maximum Size of File".	8
CE-10	A transmission method assigned to a [SCAN MENU] key cannot be used. Check the transmission methods assigned to the [SCAN MENU] keys in "Enable Scanner Delivery to:" in the Web page whether or not the method can be used.	8
CE-11	The memory became full during scanning. Scan less pages, lower the resolution, or change the color mode so that the file size is smaller, and try scanning again. For the scan mode settings, see "STORING SCANNING SETTINGS". (See Help in the Web page for explanations of each of the settings.)	11

IF YOUR E-MAIL IS RETURNED

If a Scan to E-mail is not successfully transmitted, an e-mail informing you of this fact is sent to the return address configured in the SMTP server. If this happens, read the e-mail and determine the cause of the error, and then repeat the transmission.

IMPORTANT POINTS WHEN USING SCAN TO E-MAIL

Be very careful not to send image data files that are too large.
Your mail server's system administrator may have placed a limit on the amount of data that can be sent in one e-mail transmission. If this limit is exceeded, the e-mail will not be delivered to the recipient. Even if there is no limit and your e-mail is successfully delivered, a large data file may take a long time to be received and place a heavy burden on the recipient's network, depending on the recipient's network (Internet) connection environment.
If large image data files are repeatedly sent, the resulting burden on the network may slow down the speed of other, unrelated data transmissions and in some cases, may even cause the mail server or network to go down.
The images on the following page will produce the following file sizes when scanned as 8-1/2" x 11" size or A4 size originals:

Resolution	File size of text original A when scanned	File size of photo original B when scanned	
	Mono 2 gradation	Grayscale	Full Color
75 dpi	Approx. 10 KB	Approx. 125 KB	Approx. 140 KB
300 dpi	Approx. 34 KB	Approx. 1430 KB (Approx. 1.43 MB)	Approx. 1440 KB (Approx. 1.44 MB)

* All sizes are for image files created in TIFF MMR (G4) format.
If multiple images are scanned, the file size will be approximately (Size of each image as indicated above) x (Number of images scanned).

Caution The scan resolution will vary depending on the scanning area and how much memory in the machine is free. For example, if a letter or A4 original is scanned in full color at 300 dpi with only the standard memory installed, the machine will scan the original in full color at 150 dpi and enhance the resolution to 300 dpi.
To scan a ledger or A3 original in full color at 600 dpi without using enhancement, the 256 MB memory option is required.

Although the actual limitation depends on your network environment, a general guideline for the maximum file size for Scan to E-mail is 2000 KB (2 MB). In cases where you need to send multiple documents, try such measures as lowering the resolution mode.

Original image samples

The original images shown below are samples to help you understand the above explanations. Note that these images are smaller than the actual originals (the actual originals are 8-1/2" x 11" size).

Text original A

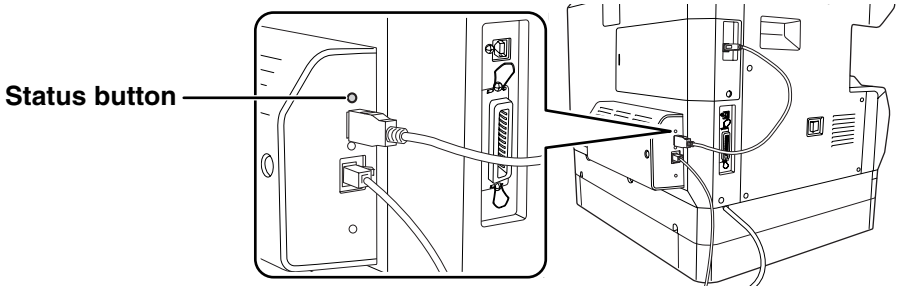
SHARP

1912 Chairman Tokuji Hayakawa sets up business as a metal worker in Tokyo.
1924 New plant constructed at site of present Sharp head office to replace original Tokyo plant destroyed in great Kanto Earthquake of 1923.
1925 Sharp succeeds in assembling Japan's first crystal radio set.
Radio broadcasting started in Japan.
1931 Sharp launches TV research. Initiates first step toward television in Japan.
1951 Japan's first television set manufactured with Sharp's advanced super-wave technology.
1960 Nara plant constructed as a base for producing electronic components and related industrial equipment in preparation for the electronic age. Mass-production of color television starts. Color television broadcasting starts in Japan.
1961 Central Research Laboratory completed. Serves as an impetus for the development of electronic technology.
1962 Sharp Electronics Corporation established in New Jersey as US subsidiary. Japan's first mass-production of microwave oven begins.
1964 World's first solid state electronic desk-top calculator "Compet" developed.
1966 World's first IC-applied electronic desk-top calculator developed. World's largest solar battery installed in unmanned lighthouse in Japan.
1968 Sharp Electronics (Europe) GmbH established in Hamburg.
1969 ELSI (Extra Large Scale Integration) developed for commercial application by Sharp through a technical tie-up with North American Rockwell.
Sharp Electronics (U.K.) Ltd. established in the United Kingdom.
1970 Construction of Sharp Advanced Development and Planning Center (ELSI plant, Central Research Laboratory, Training Center and Guest House) completed.
1974 PPC (Plain Paper Copier) "SF-710" put on sale.
Sharp Electronics of Canada Ltd. established in Canada.
1977 PPC "SF-730" with a single component toner and Pressure Fixing Process marketed.
1978 PPC "SF-810", capable of copying up to 11" × 17" or A3 size maximum at copying speed of 22 copies a minute (letter or A4 size), developed and marketed.
1979 PPC "SF-740" marketed.
SF-740's grip feeder system permits copying on paper sizes from 10" × 14" (B4) down to $5\frac{1}{2}$" × $8\frac{1}{2}$" (A6). Its two print buttons, "NORMAL PAPER" and "HEAVY PAPER", permit copying on papers from 17 lbs (65 g/m²) to 34 lbs (128 g/m²) through changing the fusing temperature.
The manual by-pass allows for copying on heavy and special papers.

Photo original B

CHECKING THE IP ADDRESS

To check the IP address of the machine, hold down the status button on the network expansion kit at least 2 seconds to print out a Printer Setting List.



SOFTWARE PROGRAMS

The "Sharpdesk LT" CD-ROM included in the network expansion kit contains the following software programs. For information on the software programs, see the user's guides on the CD-ROM.

- **Sharpdesk LT (Desktop Document Management Software)**
  Sharpdesk LT is used to manage images scanned on the machine and files created in various software programs.
  * Sharpdesk LT can be installed and used in 3 computers. If you need to install Sharpdesk LT in more than 3 computers, please contact your authorized Sharp dealer.

Caution
The Sharpdesk program on the "AR-M160/M205/5220 Series Software" CD-ROM that accompanied the machine cannot be used for the network scanner function (Scan to Desktop).
To use the Scan to Desktop function, be sure to install Sharpdesk LT (Network Scanner Tool) from the "Sharpdesk LT" CD-ROM that accompanied the network expansion kit.
If Sharpdesk LT is already installed, the new installation will overwrite the old installation.

- **Network Scanner Tool**
  This is a utility that helps you use Scan to Desktop (p.4). This utility must be installed to use Scan to Desktop. (p.27)

- **SHARP TWAIN AR/DM**
  This is used to acquire black and white images from a TWAIN interface into TWAIN-compliant software applications.

- **TypeReader Professional 5.0 trial (ExperVision, inc.)**
  This is used to scan text printed on paper and convert the image data into text data by means of OCR (Optical Character Recognition).

HARDWARE AND SOFTWARE REQUIREMENTS

To install the above software programs, your computer must meet the following system requirements.

Computer type	IBM PC/AT or compatible computer equipped with a 10Base-T/100Base-TX LAN board
Operating system	Windows 95, Windows 98, Windows Me, Windows NT Workstation 4.0 (Service Pack 4 or later)*, Windows 2000 Professional*, Windows XP Professional*, Windows XP Home Edition*
Display	800 x 600 dots (SVGA) display with 256 colors (or better)
Hard disk free space	110 MB or more
Other hardware requirements	An environment on which any of the operating systems listed above can fully operate

* Administrator's rights are required to install the software.

USER'S GUIDES FOR SOFTWARE PROGRAMS

The Manual folder in the "Sharpdesk LT" CD-ROM contains user's guides (in PDF format) for each of the software programs.

- **Sharpdesk User's Guide**
- **Network Scanner Tool User's Guide**
- **SHARP TWAIN AR/DM User's Guide**

The user's guides provide detailed explanations of installing, setting up, and using each of the software programs. Be sure to read the user's guides before installing the software.

INSTALLING THE SOFTWARE PROGRAM

Note the following when installing the software program from the "Sharpdesk LT" CD-ROM:

- Be sure to check the system requirements for installation of each of the software programs in the user's guides and on the information screen during installation.
- The user's guides give detailed instructions for installing and setting up the programs. Be sure to read the user's guides before installing the programs. In particular, if you are going to use Network Scanner Tool, be sure to carefully read the instructions regarding network preparation and setup procedures before installing the program. The network administrator should verify that network preparation has been carried out correctly.
- If you are going to send an original scanned on the machine to a computer (Scan to Desktop), Network Scanner Tool must be installed.
- If you perform a standard installation of Sharpdesk LT (select "Typical" in the Setup Type selection screen), Network Scanner Tool will be simultaneously installed. You can also select "Custom" installation and install only Network Scanner Tool.
- If your computer does not currently have Internet Explorer version 5.0 or later installed, The Sharpdesk LT installer will install a minimal version of Internet Explorer 5.01 on your computer.
- If you intend to install SHARP TWAIN AR/DM, install Network Scanner Tool first. SHARP TWAIN AR/DM cannot be installed alone.
- The contents of the information screens that appear during installation can also be found in the ReadMe files on the same CD-ROM. The ReadMe file for Sharpdesk LT is located in the root directory of the CD-ROM, and the ReadMe file for SHARP TWAIN AR/DM is located in the Twain folder.

INSTALLING SHARPDESK LT AND NETWORK SCANNER TOOL

1 Quit any software applications and/or resident programs that are running on your computer.

2 Insert the "Sharpdesk LT" CD-ROM into your CD-ROM drive.

- The Sharpdesk LT installation screen appears. Proceed to step 6.
- If the screen does not appear, proceed to step 3.

3 Click the "start" button, and then click "My Computer" ( ).

In Windows 95/98/Me/NT 4.0/2000, double-click "My Computer".

4 Double-click the CD-ROM icon ( ).

5 Double-click the "Sharpdesk" folder, and then double-click the "SETUP" icon ( ).

6 Follow the instructions on the screen.

7 When the "User Information" window appears, enter the serial number that appears on the cover of the "Important Information" that accompanied the network expansion kit, and click the "Next" button.

Follow the instructions on the screen.

- If you select "Typical" in the Setup Type selection screen, Network Scanner Tool will also be installed. If you only wish to install Network Scanner Tool, select "Custom" in the Setup Type selection screen and then check only Network Scanner Tool.
- Sharpdesk Imaging* is installed together with Sharpdesk LT. If Imaging for Windows was previously installed, Sharpdesk Imaging will overwrite Imaging for Windows.
  If Eastman Software's "Imaging for Windows Professional Edition" has already been installed on your computer, Sharpdesk Imaging will not be installed.
- "Imaging for Windows Professional Edition" and Sharpdesk Imaging use common registry entries, and installing "Imaging for Windows Professional Edition" after Sharpdesk Imaging has been installed may result in abnormal operation. In this case, uninstall Sharpdesk LT and Sharpdesk Imaging, and then install "Imaging for Windows Professional Edition". After that, reinstall Sharpdesk LT.

* Sharpdesk Imaging is a version of Eastman Software's Imaging for Windows Professional Edition that has been customized by the Sharp Corporation.

SETTING UP NETWORK SCANNER TOOL

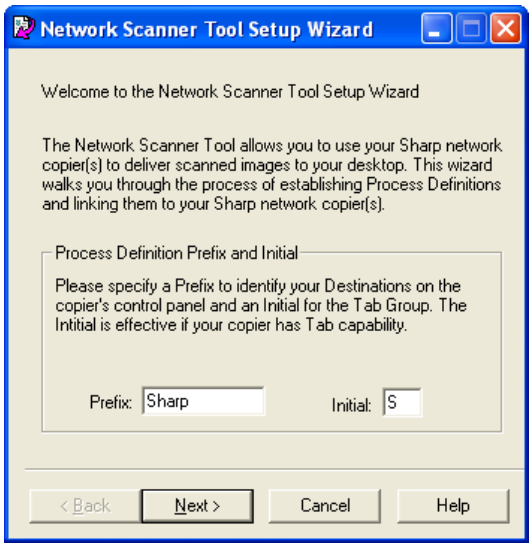
After you restart your computer (or select startup of the Network Scanner Tool) as instructed by the final window of the Network Scanner Tool (Sharpdesk LT) installation procedure, the "Sharp Network Scanner Tool Setup Wizard" starts. Follow the procedure below to set up the Network Scanner Tool. This will store your computer in the machine as a destination for Scan to Desktop.

1 When the "Sharp Network Scanner Tool Setup Wizard" starts, make sure that the machine is connected to the network and the power is turned on, and click the "OK" button.

Sharp Network Scanner Tool Setup Wizard
Before running the Network Scanner Tool Setup wizard it is necessary that your network copier(s) be connected to the network, and turned on.
Select "OK" if your copier(s) are ready and you wish to setup the Network Scanner Tool. Select "Cancel" to cancel the wizard. You can set up your copier(s) and run this wizard again at a later time.
OK
Cancel

2 Enter a prefix and an initial in the "Prefix" and "Initial" boxes, and click the "Next" button.

The "Prefix" will form part of the setting name that will appear in the Web page (p.17). The prefix can be a maximum of 6 characters long. Make sure that the prefix is different from other user and computer names.


Network Scanner Tool Setup Wizard
Welcome to the Network Scanner Tool Setup Wizard
The Network Scanner Tool allows you to use your Sharp network copier(s) to deliver scanned images to your desktop. This wizard walks you through the process of establishing Process Definitions and linking them to your Sharp network copier(s).
Process Definition Prefix and Initial
Please specify a Prefix to identify your Destinations on the copier's control panel and an Initial for the Tab Group. The Initial is effective if your copier has Tab capability.
Prefix: Sharp
Initial: S
< Back
Next >
Cancel
Help

3 Select the checkboxes of the process definitions that you wish to use and click the "Next" button.

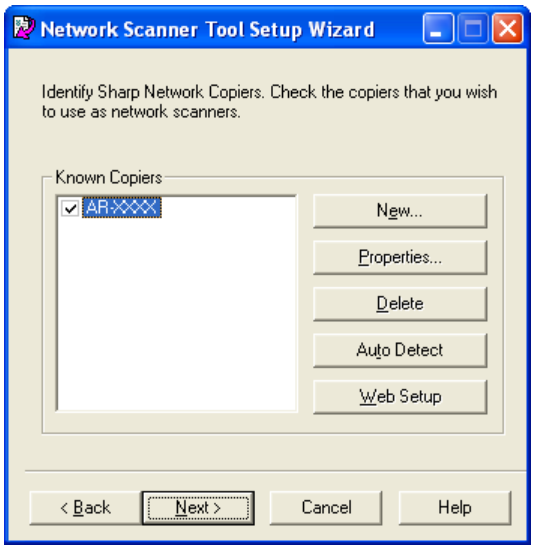
Network Scanner Tool Setup Wizard
Add additional Process Definitions or modify these. Process Definitions describe the actions that will be automatically performed on the scanned image file. The "Sharpdesk Desktop" must be checked to have images automatically appear there.
Processes
Convert By OCR
Send Email
Sharpdesk Desktop
New...
Properties...
Delete
Set as Default
The default Process Definition is displayed in bold.
< Back
Next >
Cancel
Help

The Network Scanner Tool provides process definitions as appropriate depending on whether or not Sharpdesk LT is installed. For example, if "Sharp" is entered for the "Prefix" and the provided process definitions are selected, the following setting names will appear in the Web page. (p.17)

- **If Sharpdesk LT is installed:**
  - Convert By OCR (setting name: Sharp-OCR)
    The scanned image will be converted to an editable document.
  - Send Email (setting name: Sharp-Email)
    Your computer's MAPI-compliant e-mail program will start and the image will be inserted as a file attachment.
  - Sharpdesk Desktop (setting name: Sharp-Desk)
    The image will be saved in the Sharpdesk Desktop and Sharpdesk LT will automatically start.
- **If Sharpdesk LT is not installed:**
  - Send Email (setting name: Sharp-Email)
  - My Documents (setting name: Sharp-MyDocs)
    The image will be saved in your computer's My Documents folder.

Note Process Definition defines the instruction for how the image will be processed once it arrives at the computer.

4 Make sure that the name of the machine appears, select the checkbox, and click the "Next" button.

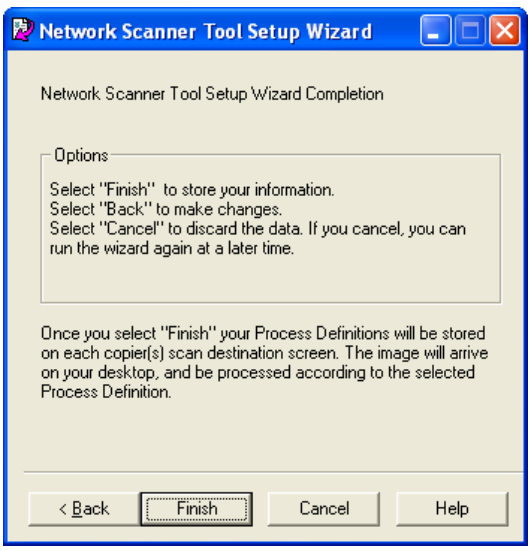


- When Windows 98/Me/NT 4.0 (Service Pack 4 or later) /2000/XP is used, the network connected machine is automatically detected.
- The automatic detection is not available when Windows 95 is used. (The "Auto Detect" button is disabled being grayed out.) Click on the "New" button and enter the IP address of the machine. To check the machine's IP address, see "CHECKING THE IP ADDRESS" (p.24).

Note

The settings configured in steps 3 and 4 can be changed later as needed. To change the settings, select "Network Scanner Tool Configuration" from the Windows start menu. For information on the settings, click the "Help" button or see the User's Guide for the Network Scanner Tool on the "Sharpdesk LT" CD-ROM.

5 When the completion screen appears, click the "Finish" button.


Network Scanner Tool Setup Wizard
Network Scanner Tool Setup Wizard Completion
Options
Select "Finish" to store your information.
Select "Back" to make changes.
Select "Cancel" to discard the data. If you cancel, you can run the wizard again at a later time.
Once you select "Finish" your Process Definitions will be stored on each copier(s) scan destination screen. The image will arrive on your desktop, and be processed according to the selected Process Definition.
< Back
Finish
Cancel
Help

INSTALLING SHARP TWAIN AR/DM

1 **Quit any software applications and/or resident programs that are running on your computer.**

2 **Insert the "Sharpdesk LT" CD-ROM into your CD-ROM drive.**

If the Sharpdesk LT installation window appears, click the "Cancel" button to exit the setup procedure.

3 **Click the "start" button, and then click "My Computer" ( ).**

In Windows 95/98/Me/NT 4.0/2000, double-click "My Computer".

4 **Click the CD-ROM icon ( ) and select "Open" from the "File" menu.**

5 **Double-click the "Twain" folder, and then double-click the "SETUP" icon ( ).**

Follow the on-screen instructions to install SHARP TWAIN AR/DM.

INSTALLING TypeReader Professional 5.0 (Trial version)

1 **Quit any software applications and/or resident programs that are running on your computer.**

2 **Insert the "Sharpdesk LT" CD-ROM into your CD-ROM drive.**

If the Sharpdesk LT installation window appears, click the "Cancel" button to exit the setup procedure.

3 **Click the "start" button, and then click "My Computer" ( ).**

In Windows 95/98/Me/NT 4.0/2000, double-click "My Computer".

4 **Click the CD-ROM icon ( ) and select "Open" from the "File" menu.**

5 **Double-click the "Trial" folder, double-click the "TypeReader" folder, and then double-click "Autorun.exe".**

6 **Click the "Install" button.**

Follow the on-screen instructions to install Type Reader Professional.

UNINSTALLING THE SOFTWARE PROGRAM

Uninstall the software with "Add/Remove Programs" in the Control Panel.

Note

- When Sharpdesk LT is uninstalled, Network Scanner Tool is also uninstalled. Note that if Network Scanner Tool is uninstalled, you will no longer be able to directly receive image data from the machine.
- If a user-created file is saved in the Sharpdesk desktop folder, the Sharpdesk desktop folder will not be deleted when Sharpdesk LT is uninstalled.
- If you are using Windows 95/98/Me/NT 4.0/2000 and uninstall Sharpdesk Imaging, you will not be able to open image files unless you re-install the Windows accessory Imaging for Windows.
- Removing SHARP TWAIN AR/DM will not delete the spooler folder which stores image data.

Uninstalling the software program from the Control Panel

1 Click the "start" button, and then click "Control Panel".

In Windows 95/98/Me/NT 4.0/2000, click the "Start" button, select "Settings", and then click "Control Panel".

2 Click "Add or Remove Programs".

In Windows 95/98/Me/NT 4.0/2000, double-click the "Add/Remove Programs" icon.

3 Select the application that you wish to delete from the list and delete it.

5 Chapter 5 SPECIFICATIONS

For information on power requirements, power consumption, dimensions, weight, and other specifications that are common to all features of the machine, refer to the operation manual for the machine.

File format	File type: TIFF/PDF/JPEG Compression mode: MH (G3)/MMR (G4)/None
File creation method	One file for all pages/One file per each 1 to 6 pages
Scan destinations	Scan to FTP, Scan to Desktop, Scan to E-mail
Supported client PC operating systems (for Scan to Desktop function)	Windows 95, Windows 98, Windows Me, Windows NT Workstation 4.0 (Service Pack 4 or later), Windows 2000 Professional, Windows XP Home Edition, Windows XP Professional
Web browser	Internet Explorer 5.5 or later, Netscape Navigator 6.0 or later
Management system	Uses built-in Web server
Network protocol	TCP/IP, SMTP, LDAP, FTP
Supported mail system	Mail servers supporting SMTP
LAN connectivity	10Base-T/100Base-TX
Number of destinations	200 maximum
Number of destinations for Scan To E-mail broadcast transmission	100 maximum*

* Multiple e-mail addresses (up to 100) can be stored as a group. Note that this may reduce the maximum number of destinations (normally 200) that can be stored.

Some discrepancies may exist in the illustrations and content due to improvements to the machine.

SHARP®

SHARP CORPORATION